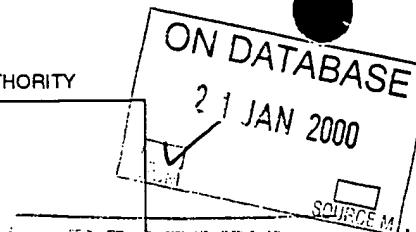


# PATENT COOPERATION TREATY

From the:  
INTERNATIONAL PRELIMINARY EXAMINING AUTHORITY

To:

GIDDINGS Peter John  
SMITHKLINE BEECHAM  
Corporate Intellectual Property  
Two New Horizons Court  
Brentford  
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GRANDE BRETAGNE



PCT

WRITTEN OPINION

(PCT Rule 66)

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| <p>Applicant's or agent's file reference<br/>FB/DM/BC45203</p>   |  |  |
| International application No.<br>PCT/EP99/01894  | International filing date (day/month/year)<br>17/03/1999 | Priority date (day/month/year)<br>20/03/1998 |
| <p>International Patent Classification (IPC) or both national classification and IPC<br/>C12N15/57</p> |  |  |
| <p>Applicant<br/>SMITHKLINE BEECHAM BIOLOGICALS S.A. et al.</p>  |  |  |

1. This written opinion is the **first** drawn up by this International Preliminary Examining Authority.

2. This opinion contains indications relating to the following items:

- I     Basis of the opinion
- II    Priority
- III    Non-establishment of opinion with regard to novelty, inventive step and industrial applicability
- IV    Lack of unity of invention
- V    Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement
- VI    Certain document cited
- VII    Certain defects in the international application
- VIII    Certain observations on the international application

3. The applicant is hereby invited to reply to this opinion.

**When?** See the time limit indicated above. The applicant may, before the expiration of that time limit, request this Authority to grant an extension, see Rule 66.2(d).

**How?** By submitting a written reply, accompanied, where appropriate, by amendments, according to Rule 66.3. For the form and the language of the amendments, see Rules 66.8 and 66.9.

**Also:** For an additional opportunity to submit amendments, see Rule 66.4. For the examiner's obligation to consider amendments and/or arguments, see Rule 66.4 bis. For an informal communication with the examiner, see Rule 66.6.

If no reply is filed, the international preliminary examination report will be established on the basis of this opinion.

4. The final date by which the international preliminary examination report must be established according to Rule 69.2 is: 20/07/2000.

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|--|--|
| <p>Name and mailing address of the international preliminary examining authority:<br/><br/> <br/>         European Patent Office<br/>D-80298 Munich<br/>Tel. +49 89 2399 - 0 Tx: 523656 epmu d<br/>Fax: +49 89 2399 - 4465       </p> | <p>Authorized officer / Examiner<br/><br/>         Grosskopf, R       </p> |
| <p>Formalities officer (incl. extension of time limits)<br/>Schou, S<br/>Telephone No. +49 89 2399 2156</p>  |  |



**I. Basis of the opinion**

1. This opinion has been drawn on the basis of (*substitute sheets which have been furnished to the receiving Office in response to an invitation under Article 14 are referred to in this opinion as "originally filed".*):

**Description, pages:**

1-38                  as originally filed

**Claims, No.:**

1-28                  as originally filed

**Drawings, sheets:**

1/3-3/3              as originally filed

2. The amendments have resulted in the cancellation of:

the description,        pages:  
 the claims,           Nos.:  
 the drawings,        sheets:

3. This opinion has been established as if (some of) the amendments had not been made, since they have been considered to go beyond the disclosure as filed (Rule 70.2(c)):

4. Additional observations, if necessary:

**III. Non-establishment of opinion with regard to novelty, inventive step and industrial applicability**

The questions whether the claimed invention appears to be novel, to involve an inventive step (to be non-obvious), or to be industrially applicable have not been and will not be examined in respect of:

the entire international application,  
 claims Nos. 14-18,20-25,28,

because:

the said international application, or the said claims Nos. relate to the following subject matter which does not require an international preliminary examination (*specify*):

the description, claims or drawings (*indicate particular elements below*) or said claims Nos. are so unclear that no meaningful opinion could be formed (*specify*):

the claims, or said claims Nos. 14-18,20-22,25,28 are so inadequately supported by the description that no meaningful opinion could be formed.

no international search report has been established for the said claims Nos. 23,24.

**V. Reasoned statement under Rule 66.2(a)(ii) with regard to novelty, inventive step or industrial applicability; citations and explanations supporting such statement**

**1. Statement**

|                               |                      |
|-------------------------------|----------------------|
| Novelty (N)                   | Claims               |
| Inventive step (IS)           | Claims 1-13,19,26,27 |
| Industrial applicability (IA) | Claims               |

**2. Citations and explanations**

**see separate sheet**

**Ad item III and V:**

In the present application a nucleotide sequence (EST) has been isolated by using a differential expression assay. For said sequence which has been arbitrarily denominated "CASB12" no function has been or could be determined. Therefore, said sequence must be considered as a "classical" EST sequence.

In view of the fact that no function has been determined, there is also no problem recognisable which is solved by said sequence (or even by sequences which have a certain degree of homology).

Therefore, the question whether said sequence fulfils the requirements of Article 33.3 (or 33.2), in principle, cannot be answered, respectively has to be denied. Thus, claims which relate to the precisely defined nucleotide sequences or proteins lack an inventive activity.

From a different point of view the isolation of said sequence is also obvious in view of e.g. D1 (EMBL database entry HS1237334; accession number AA436049; 1-JUNE-1997; Hillier et al.: 'WashU-NCI human EST project.' XP002110434 ) which discloses part of said sequence. The isolation of a larger part which "comprises" said sequence must be regarded as being devoid of an inventive activity.

Moreover, and again in view of the fact that no function could be determined, claims which relate to the (potential) use of said sequences must be considered as being totally speculative (vaccine claims and use claims).

The same, in principle, applies for the claims directed to the protein since a protein has not been prepared.

Moreover, claims which even try to broaden the scope are unclear, since, on the one hand, the skilled person has absolutely no hint in which region the 70% identity must be maintained.

On the other hand, a variation of the sequence without an aim (i.e. to retain "a" or the function (which?)) renders the claim meaningless.

No opinion at all is possible with respect to claims 23 and 24 since said claims could not even be searched.

**WRITTEN OPINION  
SEPARATE SHEET**

International application No. PCT/EP99/01894

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Finally, claims which relate to SEQ ID NOs 3 and 4 are not novel over e.g. D1 (Biochim. et Biophys. Acta (1998), vol. 1399, pages 225-228) since they do not form part of the priority document.



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One of these labels should be affixed to a prominent place in the upper part of the letter or form etc. which you are filing.